UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,782	12/27/2001	Chang Ho Oh	049128-5056	9753

9629 7590 06/05/2003

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER	
ERDEM, FAZLI	

ART UNIT	PAPER NUMBER
2826	

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,782	CHANG ET AL.	
	Examiner	Art Unit	
	Fazli Erdem	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al. (US 2001/0000439 A1) in view of Ohta et al. (6,417,906) further in view of Jenkins et al. (6,437,596) further in view of Kawano et al. (5,677,745) further in view of Allen et al. (5,491,347).

Regarding Claims 1-5, Ohta et al. (US 2001/0000439 A1) disclose a liquid crystal display device with wide viewing angle characteristics where a panel of a liquid crystal display, having a transparent insulating substrate, a gate line which is formed on the substrate, has a double-layered structure including a bottom metal layer and a top indium tin oxide layer, and extend to form a gate pad. A plurality of common electrodes which are formed on the substrate, connected on each other and separated from the gate line. An insulating layer covering the gate line and the common electrodes, a plurality of pixel electrodes which are formed on the insulating layer and are arranged between two of the common electrodes, a data line which is formed on the insulating layer and extends to form a data pad and a switching element having a gate connected to the gate line, a source connected to the data line and a drain connected to the pixel electrode. Ohta et al. (US 2001/0000439 A1) fail to disclose the required pad structure, driving structure, angle structure and direction structure. However, Ohta et al. (6,417,906) disclose a liquid crystal

display device with wide viewing angle characteristics where the required pad structure is disclosed. Furthermore, Jenkins et al. disclose integrated circuits for testing a display array where the required driving structure is disclosed. Kawano et al. disclose LCD with electrostatic discharge projections where the required angle structure is disclosed. Finally, Allen et al. disclose thin-film structure with dense array of binary control units for presenting images where the required direction structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required pad structure, driving structure, angle structure and direction structure in Ohta et al. as taught by Ohta et al, Jenkins et al., Kawano et al., and Allen et al. in order to have a liquid crystal display device with better performance.

2. Claims 11-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong et al. (6,486,494) in view of Ohta et al. (6,20,590) further in view of Jenkins et al. (6,437,596) further in view of Kawano et al. (5,677,745) further in view of Song et al. (6,531,392).

Regarding Claims 11-15, Jeong et al. disclose a composition for wiring, a wiring using the composition, manufacturing method thereof, a display using the wiring and a manufacturing method thereof. Jeong et al. fail to dislose the required pad structure, driving structure, angle structure and direction structure. However, Ohta et al. disclose liquid crystal display device with double layered structure for gate line and/or data line where the required pad structure is disclosed. Furthermore, Jenkins et al. disclose integrated circuits for testing a display area where the required driving structure is disclosed. Kawano et al. disclose LCD with electrostatic discharge projections where the required angle structure is disclosed. Song et al. disclose a

method of forming a thin film transistor array panel using photolithography techniques where the required direction structure is disclose.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required pad structure, driving structure, angle structure and direction structure in Jeong et al. as taught by Ohta et al, Jenkins et al., Kawano et al., and Song et al. in order to have a liquid crystal display device with better performance.

3. Claims 6-10 rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Ohta et al. (6,524,876) further in view of Jenkins et al. (6,437,596) further in view of Kawano et al. (5,677,745) further in view of Allen et al. (5,491,347).

Regarding Claims 6-10, Baek et al. disclose a thin film transistor array panels for a liquid crystal display and a method for manufacturing the same. Baek et al. fail to disclose the required pad structure, driving structure, angle structure, and direction structure. However, Ohta et al. (6,417,906) disclose a liquid crystal display device with wide viewing angle characteristics where the required pad structure is disclosed. Furthermore, Jenkins et al. disclose integrated circuits for testing a display array where the required driving structure is disclosed. Kawano et al. disclose LCD with electrostatic
discharge projections where the required angle structure is disclosed. Finally, Allen et al. disclose thin-film structure with dense array of binary control units for presenting images where the required direction structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required pad structure, driving structure, angle structure and

direction structure in Baek et al. as taught by Ohta et al, Jenkins et al., Kawano et al., and Allen et al. in order to manufacture a liquid crystal display device with better performance.

4. Claims 16-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (6,555,409) in view of Ohta et al. (6,20,590) further in view of Jenkins et al. (6,437,596) further in view of Kawano et al. (5,677,745) further in view of Song et al. (6,531,392).

Regarding Claims 16-20, Kim et al. disclose a method for fabricating a thin film transistor array substrate for liquid crystal display. Kim et al.fail to dislose the required pad structure, driving structure, angle structure and direction structure. However, Ohta et al. disclose liquid crystal display device with double layered structure for gate line and/or data line where the required pad structure is disclosed. Furthermore, Jenkins et al. disclose integrated circuits for testing a display area where the required driving structure is disclosed. Kawano et al. disclose LCD with electrostatic discharge projections where the required angle structure is disclosed. Song et al. disclose a method of forming a thin film transistor array panel using photolithography techniques where the required direction structure is disclose.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required pad structure, driving structure, angle structure and direction structure in Kim et al. as taught by Ohta et al, Jenkins et al., Kawano et al., and Song et al. in order to make a liquid crystal display device with better performance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (703) 305-3868. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

FE
June 2, 2003